

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S85	1	"10542830"	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 11:21
S86	207	"315"/.clas. and constant near3 current and constant near3 voltage and logic\$2 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 13:53
S87	166	S86 and (light or illumination or LED or light adj emitting adj diode)	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 13:59
S88	1	luminous near3 intensity near3 stabilization near3 circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:00
S91	4707	S90 and power	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:01
S90	5265	S89 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:01
S89	18398	constant near3 current near3 circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:01
S92	760	S91 and (thermal or temperature) near3 (element or sensor or unit)	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:02
S93	157	S92 and (light adj emitting adj diode)	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:20
S94	349	S92 and constant near3 voltage near3 circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:21
S95	59	S94 and ("362"/.clas. or "315"/.clas. or "257"/.clas.)	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:24
S97	50	S96 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:25
S96	4464	362/218,219,221,646,234,249,276. ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/04/24 14:25
S98	3210	315/291.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 13:50
S99	1595	S98 and (thermal or temperature or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 13:51

## EAST Search History

S10 0	392	S99 and constant adj (current or voltage)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 13:52
S10 1	366	S100 and (light or lighting or illumination)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 14:50
S10 2	1	10/731344	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 14:51
S10 3	11	("20030102819" "20050077838" "4794373" "5008595" "5661645" "6158882" "6158882" "6198872" "6203180" "6318886" "6481877" "6614126").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 14:53
S10 4	56	"20040178737" or "6161910" or "20030048641" or "20040135522" or "65771512" or "5661374"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:00
S10 6	147985	S105 and circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:02
S10 5	321792	(LED or light adj emitting adj diode) and (string or array or matrix or module or cluster or group)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:02
S10 9	5018	S108 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:04
S10 8	17364	S107 and voltage with (regulator or change or adjust or constant)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:04
S10 7	39603	S106 and current with (control or regulator or constant or adjust)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 15:04
S11 0	393	S108 and comparator with (thermal or heat or temperature)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:33
S11 5	235	S114 and constant adj voltage	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:35
S11 4	588	S113 and constant adj current	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:35
S11 3	3814	S112 and (temperature or thermal or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:35
S11 2	7570	S111 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:48

## EAST Search History

S11 7	365	S116 not S115	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:49
S11 6	402	S111 and comparator with (temperature or thermal or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 16:49
S11 8	17531	(light adj emitting adj diode) with (module or string or matrix or array)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:00
S11 1	70932	(light adj emitting adj diode) and (module or string or matrix or array)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:00
S11 9	79	S118 and constant adj current adj circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:01
S12 1	1681	S118 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:03
S12 0	20	S119 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:03
S12 2	233	S121 and sens\$3 with (temperature or thermal or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/10 17:04
S12 3	175	("3641487"   "3673462"   "3737647"   "3906482"   "4047049"   "4148045"   "4211955"   "4211956").PN. OR ("4298869"). URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:10
S12 5	17	("5159520").URPN.	USPAT	AND	ON	2007/05/11 08:27
S12 4	3	("4667265"   "4760434"   "4924112").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:27
S12 6	6	("4291280"   "4329625"   "4523265"   "4639611"   "5013971"   "5323305").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:32
S12 7	4	("4001649"   "4052744"   "4727450"   "5073838").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:35
S12 8	3	("6349023").URPN.	USPAT	AND	ON	2007/05/11 08:37
S12 9	16	("5278432"   "6095661"   "6160596"   "6161910").PN. OR ("6351079"). URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:38

## EAST Search History

S13 1	2998	362/249,217.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:52
S13 0	10	("0041970"   "4001649"   "4052744"   "4428016"   "4628397"   "4727450"   "5073838"   "6349023").PN. OR ("6667869"). URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:52
S13 2	529	S131 and (LED or diode) and circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 08:53
S13 3	301	S132 and (temperature or thermal or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:01
S13 5	1018	S134 and (LED or light near emitting near diode)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:02
S13 4	4663	315/291,307.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:02
S13 7	234	S136 and power	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:03
S13 6	243	S135 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:03
S13 8	165	S137 and (thermal or heat or temperature)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:04
S13 9	46	S137 and (thermal or heat or temperature) with (unit or element or sensor)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:13
S14 2	26	S140 and "315"/.clas.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:28
S14 1	10	S140 and "362"/.clas.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:28
S14 3	4	("2004/0264195").URPN.	USPAT	AND	ON	2007/05/11 09:39
S14 0	688	(Light near emitting near diode) and power and (intensity with stabilization with circuit or constant adj current or constant adj voltage) and comparator and (thermal or temperature) with (sensor or unit or element)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:52

## EAST Search History

S14 4	516	S140 and @ad<="20030127"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 09:53
S14 7	0	S146 and thermal	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:15
S14 6	2	S145 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:15
S14 5	6	("4967192"   "5061861"   "6400349"   "6466188"   "6486726"   "6628252").PN. OR ("6980181"). URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:15
S14 8	23	("5907569"   "6111367"   "6161910").PN. OR ("6400101"). URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:16
S14 9	3	S148 and comparator and (thermal or temperature)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:20
S15 1	1440	S150 and light near emitting near diode	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:21
S15 0	2095	@ad<="20050720" and ((circuit adj board) or (wir adj board) or pcb or pwb or (synthetic adj resin adj sheet) or substrate or (FPCB) or (flexible adj printed) or (FPC) or (flexible adj substrate) or (flex) or (rigid adj flex) or (static with flex)) and (LED or (light adj emitting adj diode)) and ((power adj (supply or module)) or transformer or (voltage adj (regulator or adjuster))) and (photo adj (detector or resistor or transistor or sensor or (conductive adj cell) or modulator))	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:21
S15 2	91	S151 and ("362"/.clas. or "315"/. clas.)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:22
S15 3	5	("4057310"   "5281147"   "5697810"   "6016038"   "6283612").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:27
S15 6	14	S155 not S154	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:34

## EAST Search History

S15 5	137	light near emitting near diode and (substrate or circuit adj board) and power and (constant adj current or current near regulator) and (constant adj voltage or voltage near3 regulator) and comparator and logical	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:34
S15 4	236	light near emitting near diode and (substrate or circuit adj board) and power and (constant adj current or current near regulator) and (constant adj voltage or voltage near3 regulator) and comparator and logic	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:34
S15 7	6	("3202868"   "3486067"   "3691390"   "3714470").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/11 10:37
S15 9	2	S158 and comparator	USPAT	AND	ON	2007/05/11 10:39
S15 8	14	("3787752").URPN.	USPAT	AND	ON	2007/05/11 10:39
S16 0	6	"6747420"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:18
S16 1	18	"4504776"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:33
S16 2	1	10/542830	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:35
S16 3	27289	(led or light near emitting near diode) with (circuit adj board or substrate)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:37
S16 4	695909	(thermal or temperature or heat) with (element or unit or sensor or detector)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:38
S16 5	5857	S163 and S164	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:39
S16 6	323	S165 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:58
S16 9	206537	comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 09:59
S17 1	788	S167 and S168 and S169 and S170	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:00

## EAST Search History

S17 0	178840	logic\$2 near3 circuit	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:00
S17 3	4	("20030142047" "6448718" "6583775" "6593919").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:02
S17 2	2	S171 and S163	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:02
S17 6	13808	S169 and S174 and S175	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:03
S17 5	155846	voltage near3 (regulator or constant)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:03
S17 4	125151	current near3 (regulator or constant)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:03
S16 8	46116	voltage near3 regulator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:03
S16 7	15596	current near3 regulator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:03
S17 8	47	S177 not display	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:04
S17 7	116	S176 and S163	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:04
S17 9	10	("3033970"   "4298869"   "4673864"   "4717868"   "5152599"   "6166496"   "6218785"   "6346777"   "6791283").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:09
S18 1	513	bhat.in.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:44
S18 0	0	"2001032985"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:44
S18 3	33	"6486499"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:47
S18 2	25	bhat.in. and jerome.in.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/17 10:47

## EAST Search History

S18 6	2252	S185 and module	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:44
S18 5	6393	S184 and current	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:44
S18 4	7379	LED and (heat or temperture or thermal) and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:44
S18 8	389	S187 and current	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:45
S18 7	411	LED with module and (heat or temperture or thermal) and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:47
S18 9	38	LED near module and (heat or temperture or thermal) and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:55
S19 2	93	S191 and current	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:56
S19 1	239	S190 and (LED or light near3 diode)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:56
S19 0	1921	361/728-731,716.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 08:56
S19 3	4	S192 and comparator	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 09:01
S19 4	398	((LED or light near3 diode) and current and (heat or thermal or temperature)).ab.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 09:02
S19 5	20	("3925690"   "3943694"   "4026102"   "4090189"   "4160934"   "4513242"   "4864197"   "4959642"   "5359691"   "5390276"   "5422756"   "5528720"   "5828488"   "6069448"   "6069449"   "6107985"   "6124971"   "6147723"   "6150771"   "6445444").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 11:35
S19 7	11	("4947291"   "4963798"   "5038255"   "5390092"   "5580163"   "5632551"   "5765940"   "5782555"   "5785418"   "5857767"   "6045240").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 11:39



## EAST Search History

S19 6	4	("5278432"   "6095661"   "6160596"   "6161910").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 11:39
S19 8	15	("20020030992"   "20020093832"   "20030167666"   "20030202349"   "20040022057"   "20040041521"   "5276591"   "5526236"   "5808592"   "5842297"   "5950340"   "6042248"   "6481130"   "6505956"   "6558021").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 13:21
S19 9	0	S198 and constant adj current	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:03
S20 0	24	("20020103022" "20020130786" "20020140880" "20030169226" "20030214506" "5206778" "5406172" "5451979" "5697705" "5757008" "5859658" "5912568" "6107985" "6111739" "6147699" "6161910" "6188571" "6256007" "6349023" "6362740" "6400101" "6400102" "6459919" "6609655").PN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:42
S20 1	26	@ad<="20030101" and (LED or (Light adj emitting adj diode)) and ((temperature or thermal or heat) adj (resistor or switch or sensor or detector)) and ((photo adj resistor ) or (light adj (sensitive or regulator))) and ((power or electrical) adj (connector or plug or joint or link or connection or terminal or lead or pin or land or inteconnection or pad or contact)) and (("362"/\$).ccls. or ("361"/\$).ccls. or (257/676,666)".ccls" or ("315"/\$).ccls.)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:56
S20 4	113	S202 and (thermal or temperature or heat) near4 (sensor or detector)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:57
S20 3	1086	S202 and (thermal or temperature or heat)	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:57
S20 2	3786	362/276,261-265,295.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/23 15:57
S10	1705	362/249.ccls.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/30 10:07

## EAST Search History

S20 6	5	("4449074"   "4694223"   "5800052"   "5801490"   "5863111").PN. OR ("6144160").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/30 10:08
S20 5	1	"6144160"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/30 10:08
S20 8	7	("4329625"   "5012162").PN. OR ("5598068").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/30 10:09
S20 7	7	"5598068"	US-PGPUB; USPAT; USOCR	AND	ON	2007/05/30 10:09
S20 9	4534	logic\$2 with circuit and current with detect\$3 and light with diode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	AND	ON	2007/05/30 10:23
S21 0	212	S209 and ("362"/.clas. or "315"/. clas.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	AND	ON	2007/05/30 10:24